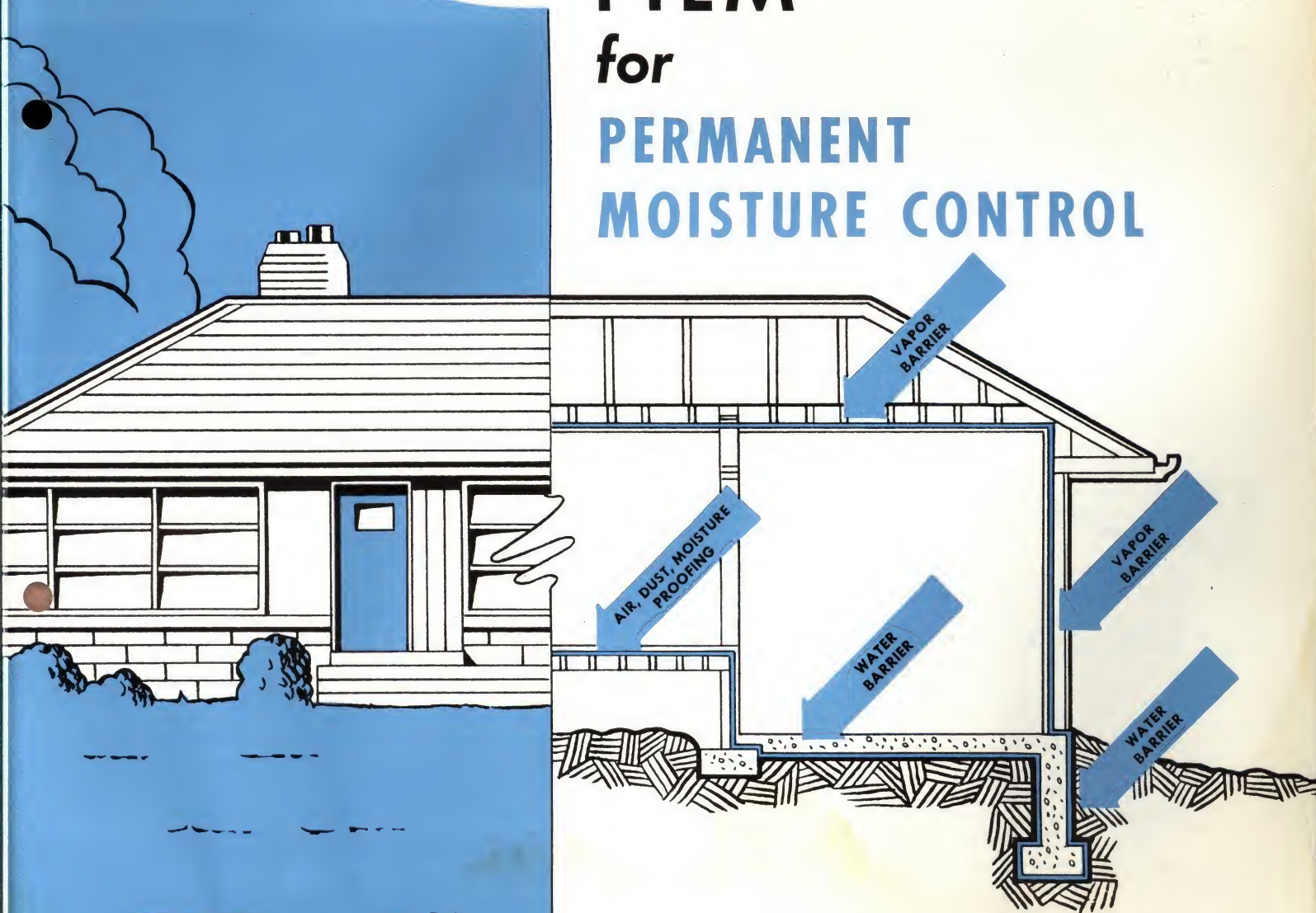


VisQueen

T.M.

FILM
for
**PERMANENT
MOISTURE CONTROL**



THE VISKING CORPORATION
PLASTICS DIVISION
TERRE HAUTE INDIANA

VisQueen

A PERMANENT VAPOR BARRIER

Condensation control in building construction is an important part of design and construction. Difficulties such as paint peeling, wood decay result from poor condensation control. The result of poor, or no condensation control is high maintenance cost and owner dissatisfaction.

Poor moisture vapor control evidences itself visibly most commonly by paint peeling off exterior siding. Excess moisture absorbs extractives from the wood resulting in stains on the siding surface. Stains are a prelude to paint blistering and peeling and eventual decay of the wood and loss of insulative value of the insulation which has become moisture soaked.

The only positive preventive and control of condensation problems is an adequate permanent moisture vapor barrier. Vapor barriers are no better than their quality and thoroughness of installation.

VISQUEEN film is a permanent moisture vapor barrier. Being pure, virgin polyethylene film it is flexible, strong, puncture and tear resistant. It does not age or become brittle and break or pinhole. VISQUEEN is light weight and pound for pound with any other low priced moisture vapor barrier costs less to install. One thousand square feet of VISQUEEN film for walls weighs less than 10 pounds. It will stay in place for the life of the building without deteriorating.



Wide VISQUEEN film is laid on layer of sand with six inch laps. Reinforcing mesh is put in place over film. Light weight VISQUEEN is easy to handle—reduces labor costs.

VisQueen

Fulfills Requirements

Because VISQUEEN is a pure plastic—virgin polyethylene film—it is a superior moisture vapor barrier. The Housing & Home Finance Agency, based on studies of the Forest Products Laboratory, has defined a good moisture vapor barrier as follows, "A good moisture vapor barrier should permit not more than 1 grain of water vapor to pass through an area 1 foot square in 1 hour when the vapor pressure difference is calculated on the basis of 1 inch of mercury when tested by a dry method." VISQUEEN film meets these requirements with a 900% margin according to tests conducted at the University of Minnesota by Frank B. Rowley* in which VISQUEEN film permitted only 0.10 grains moisture /sq. ft./ in Hg vapor pressure difference. Another requirement set forth says "It should have sufficient mechanical strength to permit handling without damage. It should also retain its vapor resistance qualities for the life of the building." VISQUEEN meets or betters these requirements and adds these—low temperature flexibility, light weight for ease of placement, can be delivered in rolls of up to 16 foot widths in a single continuous roll which means no seams to rupture, no piecing together of narrow strips.

*Full test results available on request.

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CHARACTERISTICS and ADVANTAGES

Permanent Protection—VISQUEEN film does not deteriorate with age, get brittle or crack. It is pure, virgin polyethylene so there is no plasticizer to leach out. VISQUEEN film gives permanent protection.

Will Not Flash or Sustain Combustion—When flame is applied the film just melts slowly. There are no additives to VISQUEEN film. It is pure, odorless and non-toxic—contains nothing that will flash.

Light Weight—Low Installation Cost—VISQUEEN film provides 30,000 square inches to one pound of .001" thickness. Its light weight reduces labor cost. Up to 16' seamless one piece widths are handled with ease. Application to side walls, forms and under slabs is quick and efficient. VISQUEEN film has strength without weight or bulk.

Won't Crack, Break or Shatter—VISQUEEN film is soft and flexible yet puncture and tear resistant because it is inherently tough. It stays tough and flexible, does not pinhole when folded or flexed. If punctured VISQUEEN film will not run—it can take rough handling.

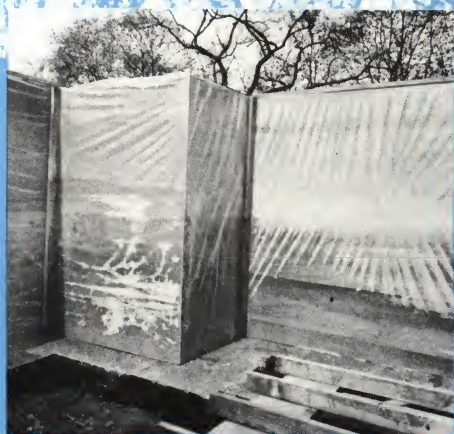
Unaffected By Temperature or Humidity—VISQUEEN film can be put in place summer or winter. It remains flexible down to the minus 70's F., which makes handling easy when temperatures are high or low. Humidity has no effect on VISQUEEN film as it will not absorb moisture. It is unaffected by acids, alkalis and caustics because it is inert. Provides good weather protection for machinery, materials.

Dust Proofing—Air Resisting—VISQUEEN not only provides a moisture vapor and water barrier but also makes walls air resistant. When used over sub-flooring VISQUEEN film makes floors air and dust proof.

Ideal Curing Cover—Because of the low MVT of VISQUEEN film it makes an ideal cover for curing concrete. When used in forms it is held in place by the concrete and provides complete water proofing when forms are removed. Forms need no varnishing or greasing. Under slabs VISQUEEN film stops cement water solution loss into the fill and over slabs prevents flaws that result from uneven curing.

Weather Protection—When VISQUEEN film is used in side walls openings are covered protecting building interior from the elements. Being transparent the film allows light in while protecting plaster, etc.

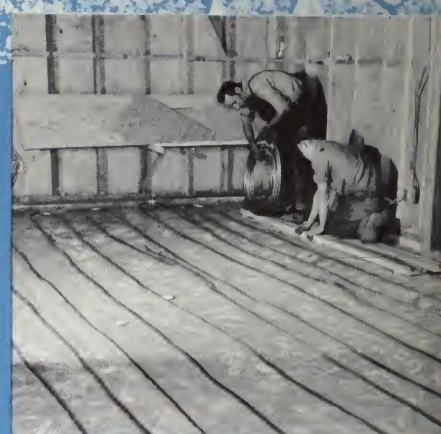
plastic film VAPOR BARRIER



VISQUEEN applied on inside of exterior foundation wall form. It is anchored under or lapped at top of footing. Joint of footing and wall should be caulked. VISQUEEN is stretched tightly, full wall length, and anchored at corners by toe nailing 2 x 4 studs which are removed after a foot of concrete is poured.



VISQUEEN film is applied to studding by stapling. If narrow widths are used i. e. for vertical application, it should be lapped the full width of the stud on alternate studs. Ceiling and floor laps should be six inches. Film should be sealed around junction boxes, pipes, outlets, etc. in the walls.



VISQUEEN film is inert so radiant heat pipes and other pipes or materials will not effect it nor will it have a deteriorating effect on anything in contact with it. VISQUEEN will not effect the efficiency of the heating system.

APPLICATION

- 1 **Slabs**—VISQUEEN film is simply laid over a layer of sand which protects it from being punctured by sharp objects. A lap of six inches should be allowed and the top layer of the lap seam should point in the direction in which the concrete is spread.
- 2 **Side Walls**—VISQUEEN film may be applied in either of two methods. Sheeting 33½ inches wide may be applied vertically to the 2" x 4" studding on 16" centers with a full lap on alternate studs. Or, VISQUEEN film sheeting (up to 16' widths) may be applied horizontally. The film should be stapled to the studding.

Foundation Walls—Application of VisQUEEN film can be made by one of these methods:

- (A) After walls have been poured and forms removed the VisQUEEN film should be positioned against the outside of the walls before back filling.
- (B) VISQUEEN film may be applied on the inside of forms having no internal bracing. It should be positioned so it will be on the outside of the wall. This will permit early removal of forms while providing a slow cure of the concrete.
- (C) VISQUEEN film may be used as a form liner and will be held around the walls after removal of the forms. It is important that the VisQUEEN film be put in position in such a manner that it will not be punctured. When used in the forms VisQUEEN film eliminates the need for greasing or shellacking and the waterproofing of the walls after removal of the forms. VisQUEEN film provides a permanent moisture vapor and water barrier.
- 3 **Ceilings**—VISQUEEN film should be applied to the warm side of the ceiling joists by stapling to the joists lengthwise with laps of at least the full width of the joists. A full six inch overlap onto the walls should be allowed.
- 4 **Floors**—For moisture, air and dust proofing of floors, VISQUEEN film should be applied over all sub-flooring in as full widths as practical. The film should be lapped up 6" on the side walls.

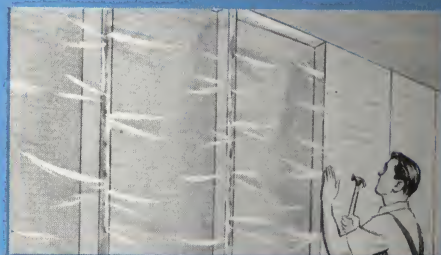
SIZES AND THICKNESSES AVAILABLE

VISQUEEN film is available in easy to handle seamless sheeting up to 16 foot widths in thickness from 2 mil (.002") to 20 mil (.020"). VISQUEEN film is the only pure polyethylene film made in seamless sheeting of such widths. Standard colors are also available and special colors and thicknesses are available on special order.

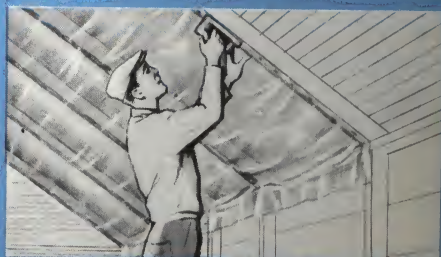
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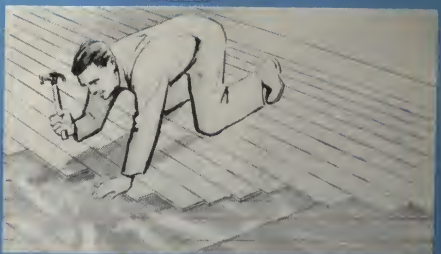
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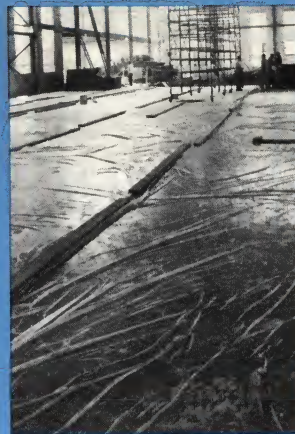
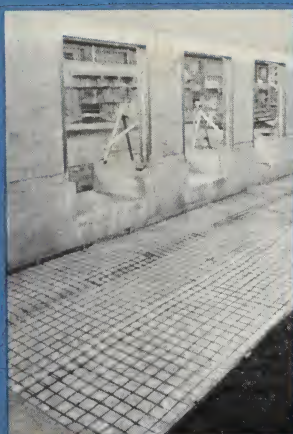


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VISQUEEN film provides waterproofing and moisture vapor protection for all buildings. It is put in position under the reinforcing mesh, laid over a layer of sand to protect it from punctures. Joints should be lapped 6 inches and the concrete spread in the direction of the lap. No special handling is required nor any additional waterproofing. For curing, a thin layer of water is spread over the slab and the VISQUEEN film laid over the water. No further watering

is necessary. The VISQUEEN may be used over and over—it will not rot.

VISQUEEN film is a pure plastic—has no added plasticizers therefore will not block or stick together. It is easily handled because the wide widths are center folded and it is lightweight. The material is easily slit with a knife or razor blade.

TEST RESULTS

MOISTURE VAPOR TRANSMISSION RATE

Thickness (in.)	Grams
.0013	1.17 Measured in grams/100 sq. in./24 hrs. at 90% R.H. at 100° F.
.002	.55
.0025	.40
.003	.35 The moisture vapor transmission in-.0035 creases about 60% for every 10° F.
.0035	.325
.004	.30 rise in temperature.
.0085	.14

DIRECTIONAL PROPERTIES OF VISQUEEN FILM

	Deg. F.	Longitudinal Direction	Transverse Direction
Tensile strength, lb. per square in.	77.0 32.0 —0.4 77.0 32.0 —0.4 77.0	2,482 2,987 3,428 228 100 71 181	1,597 2,050 2,524 184 53 42 123
Elongation, percent stretch	77.0 32.0 —0.4 77.0	44 28 90 61	291 262 50 53
Tear strength, g. per mil thickness	77.0 32.0 —0.4 77.0	Satisfactory	Satisfactory
Impact puncture resistance, in oz. per in. of tear at	77.0 32.0 —0.4 77.0		
Flexure	77.0 32.0 —0.4 77.0		
Average thickness .00207 in.			

USE SPECIFICATIONS

FOR VISQUEEN VAPOR BARRIER AND WATERPROOFING FILM

Vapor barrier shall be a lapped (and joint sealed) layer of VISQUEEN film, (which meets the FHA requirements and Fed. Spec. UUP-147, and which is of uniform thickness throughout, free of pinholes, nozzle scars and other blemishes), and applied in accordance with the manufacturers instructions and the following use specifications.

Exterior Walls And Ceilings—Walls and ceilings exposed to unheated areas and unventilated areas shall be vapor-proofed with VISQUEEN of 2 mil (.002") thickness to prevent the penetration of moisture vapor.

The VISQUEEN vapor barrier shall be applied as near as possible to the warm side of the construction.

All joints between sheets of VISQUEEN shall occur over solid and continuous backing and shall be lapped a minimum of 3 inches. Laps onto ceiling and floor shall be 6 inches.

Attachment shall be with staples, with 1/4" to 3/4" leg length and applied with a Duo Fast, or similar gun or compression staple tacker, spaced not more than 6 inches o.c. There shall be no stapling or

attachment on intermediate studs or joists except as where they may be necessary to keep the material in place so as not to interfere with other operations.

Proper caution shall be exercised during construction after application of VISQUEEN vapor barrier to prevent puncture or other damage to the VISQUEEN.

Wood Floors—Application of VISQUEEN over sub-floors shall be accomplished using widest practical widths of 2 mil (.002") thickness VISQUEEN laid directly onto the sub-floor. Finish flooring shall be applied in the conventional manner, over the vapor barrier.

Concrete Floors—VISQUEEN vapor barrier of 4 mil (.004") thickness, of any standard width, shall be applied over a sub-grade which has been smoothed by any suitable method which will prevent protrusions that may cause damage or rupture of the VISQUEEN. The VISQUEEN shall be lapped not less than six inches with the top lap placed in the direction of the spreading of the concrete. If below-slab insulation is used, it shall be applied over the VISQUEEN, prior to pouring the concrete. Laps on adjoining wall surfaces should be sealed in a suitable manner.

Mechanical Properties of VISQUEEN

In stiffness VISQUEEN film is intermediate between the rigid and non-rigid plastics. It is quite flexible but not limp or rubbery.

VISQUEEN film has excellent tear strength. When punctured it will not shatter, split or run at either low or high temperatures.

VISQUEEN film remains flexible at low temperatures. Because it does VISQUEEN film will not "pinhole" when folded or creased nor does it weaken on the fold or crease.

VISQUEEN film will not absorb moisture, is mold resistant, will

not rot or mildew. When in place under slabs, around foundations or in the walls it will protect for the life of the building.

IMPORTANT: Be certain that VISQUEEN film is the moisture vapor barrier you specify. VISQUEEN is all polyethylene but not all polyethylene is VISQUEEN. Only VISQUEEN comes in wide widths, only VISQUEEN is produced by process of U. S. Patents No. 2461975 and 2632206. Only VISQUEEN has the benefits of research and technical experience of The Visking Corporation, pioneers in the development of polyethylene film.

THE VISKING CORPORATION Plastics Division

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